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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/827,170 | 04/06/2001 | Shuhei Iizuka | 108340 | 4382 |

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

KNABLE, GEOFFREY L

| ART UNIT | PAPER NUMBER |
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1733

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DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,170

Applicant(s)

IIZUKA, SHUHEI

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: ____

1. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 9, reference is made to forming "said reinforcing layer" whereas earlier in the claim, this is described as reinforcing *layers* (i.e. plural) – this raises an ambiguity as it is not clear if this forming step is directed to all the "layers" described earlier.

In claim 1, line 13, "the a side surface" is awkward and confusing.

The last line of claim 1 is also somewhat awkward and confusing in referencing "formation of a green tire for the tire to be produced."

Additionally, it is noted that as presently phrased, the steps in claim 1 would seem to define a process in which the reinforcing layers are first formed as a laminated body and then applied at the desired position during the building of the tire – in other words, claim 1 would seem to define a process in which the reinforcing layers are preformed rather than being formed in situ during the tire building. From the disclosure as a whole, as well as dependent claim 6, however, it appears that the intent is that claim 1 be generic to either formation technique. Insofar as the claim 1 language is not at present considered to be reasonably read in this manner (i.e. it seems restricted to preforming the layers), clarification of this apparent inconsistency is required.

In claims 8 and 10, the term "type" raises the potential for confusion as it could be considered that it is not clear what makes an extruder be this "type" – it is suggested that this term be deleted to avoid this potential ambiguity.

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-192479 to Bridgestone or JP 10-315717 to Bridgestone taken in view of Laurent (US 4,963,207), Holroyd et al. (US 5,114,512) and Holroyd et al. (US 4,983,239).

JP '479 to Bridgestone discloses the advantageous use of a bead filler rubber composition including embedded short fibers while JP '717 to Bridgestone discloses the advantageous use of a short fiber reinforced rubber layer in various locations between the bead and belt areas of the tire (note the abstract and figures of each reference; it is noted that these references were also mentioned in the related art section of applicant's specification). Neither reference however suggests forming these layers by spirally winding a ribbon as claimed.

Laurent is directed to a process for forming a tire by spirally winding rubber ribbons to form rubber components in various areas of the tire including the bead and sidewall areas (e.g. col. 6, lines 34-56), this avoiding the need to form semi-finished products as well as avoiding the need for separate die sizes, etc for each product (e.g. col. 2, lines 3-40). Similarly, Holroyd et al. '512 discloses the spiral winding of rubber strips as an improvement over the prior formation of the strips as complete profiled extrusions, this method being principally directed to forming the bead filler as a spiral winding – note esp. col. 1, lines 31-53 and the figures. Holroyd et al. '239 discloses

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forming the apex (14) of a tire (as well as other adjacent components if desired) by helically winding an extruded ribbon on a form so as to avoid potential component displacements during shaping and thereby improve tire consistency – note esp. col.1. In light of these teachings and the advantages taught to follow therefrom, it is submitted that the ordinary artisan would have found it to have been obvious to form the rubber filler of JP '479 or the similar rubber reinforcing layer (located in the region of the filler) of JP '717 in the form of a spirally wound ribbon rather than as a preformed whole layer – only the expected results would have been achieved.

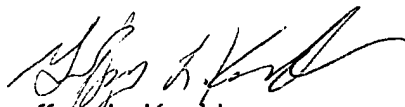
As to the dependent claims, the primary references are considered to suggest locations for the short fiber layer consistent with that claimed and further the secondary references would have suggested to the artisan that either in situ formation on the drum/carrier used to form the tire (e.g. Laurent and apparently Holroyd et al. '512) or preformation on a carrier (e.g. Holroyd et al. '239) would have been both suitable, effective and obvious variants. Finally, the type of extruder used would have been an obvious selection for the artisan, both claimed types being well known and conventional. Note also Laurent would suggest some advantages for volumetric type extruders (apparently the same as the claimed positive displacement type) – the particular choice however would have been well within the skill of the artisan to make, the advantageous and disadvantageous attributes of each being considered to have been well understood by the ordinary artisan.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 703-308-2062. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
November 2, 2002